SECTION I - PART E

EMERGENCY ACTION PLAN

Program: **EMERGENCY ACTION PLAN**

Facility: Waimanalo Gulch Sanitary Landfill (WGSL)

Location: 92-460 Farrington Highway, Kapolei, HI 96707

Date: **December 2008**

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1.0 INTRODUCTION

This Emergency Action Plan was prepared by Waste Management of Hawaii (WMH) for the Waimanalo Gulch Sanitary Landfill (WGSL) and contains procedures to be implemented in the event of an emergency at the WGSL. All personnel on-site at the WGSL, including contractors and subcontractors, will be informed of the procedures and requirements of this Plan, as they relate to potential fire, explosion, health, safety, or other hazards.

A Fire Prevention Plan is included in Appendix A that evaluates and identifies potential fire hazards, ignition sources, on-site fire fighting equipment, and the proper handling of combustible materials.

If there are any questions regarding the procedures described in these plans, please contact WGSL / WMH Management.

1.1 EMERGENCY RESPONSE PERSONNEL

In the event of an emergency, the **Emergency Coordinator (EC)** has primary responsibility for responding to correcting, and documenting and reporting emergency situations. This includes taking appropriate measures to ensure the safety of WGSL personnel and the public. Possible actions may involve evacuation from the site or evacuation of adjacent residents.

Section 2.0 contains a list of emergency response telephone numbers, including the EC and key WGSL / WMH personnel (alternate ECs). This list is posted in the lounge, main administration office (upstairs and downstairs), in the scale house, and in the parts container at the maintenance shop. The first person on the scene will follow the normal procedures for emergency response, as outlined in this Plan, until the designated EC (or alternate) arrives at the scene. All EC's will be properly trained in this procedure.

In some cases, Waste Management, Inc. (WM) West Group personnel will need to be called upon for assistance during emergency situations. Refer to Section 2.0 below, for a list of key WM West Group personnel who may be notified in the event of an emergency at the WGSL, if deemed necessary.

1.2 RELEASE OF INFORMATION TO THE PUBLIC / MEDIA

Inquires from the media are likely in the event of an emergency. The WMH Vice President / General Manger, Community Affairs Manager, or other designated spokesperson will coordinate all media relations and responses to any media request, as well as contact the necessary WM West Group personnel. If approached or contacted by the press, unauthorized personnel should not answer any questions or make any statement to the media – please refer them to one of the individuals listed above.

1.3 SITE MAP

A WGSL site location map (Figure 1), evacuation route map (Figure 2), and building floor plans for the maintenance shop area (Figure 2a), employee lounge (Figure 2b) main administration office (Figures 2c & 2d), and scale house (Figure 2e) and are attached to this Plan. These figures detail exits, evacuation routes, fire extinguisher and fire alarm locations, emergency shut-offs, and the designated WGSL evacuation area, which is currently **THE GRASS AREA BY THE GUARD SHACK, NEAR FARRINGTON HIGHWAY** (see Figure 1).

1.4 ALTERNATE WASTE DISPOSAL PLAN

In the event the liner associated with any landfill cell is damaged, the alternate waste disposal plan is to seek authorization to temporarily landfill MSW and ash in other areas of the landfill that will have minimal impact on the damaged portion of the landfill, and if that alternative is not available, to temporarily utilize other landfills and off-island shipping options as appropriate.

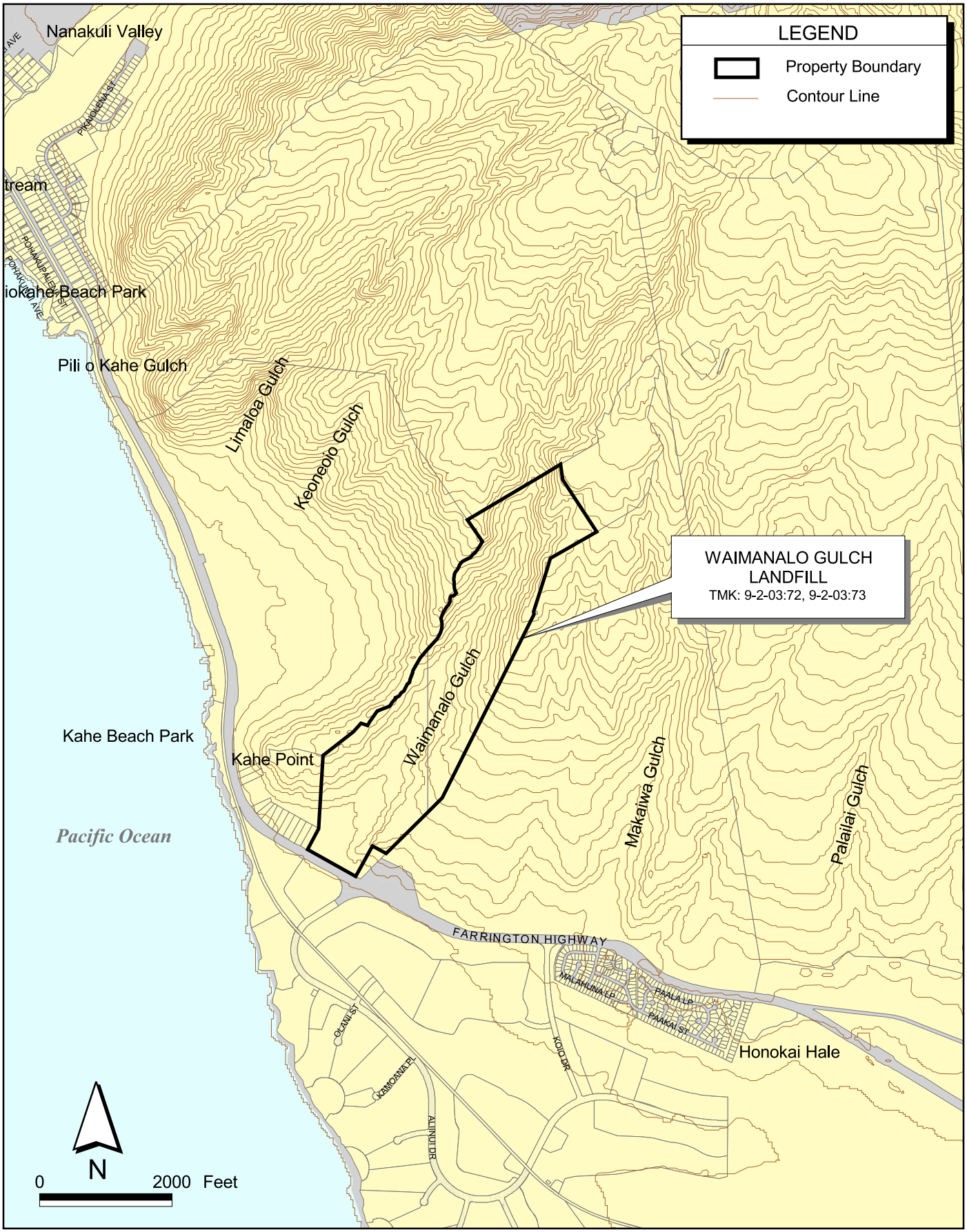

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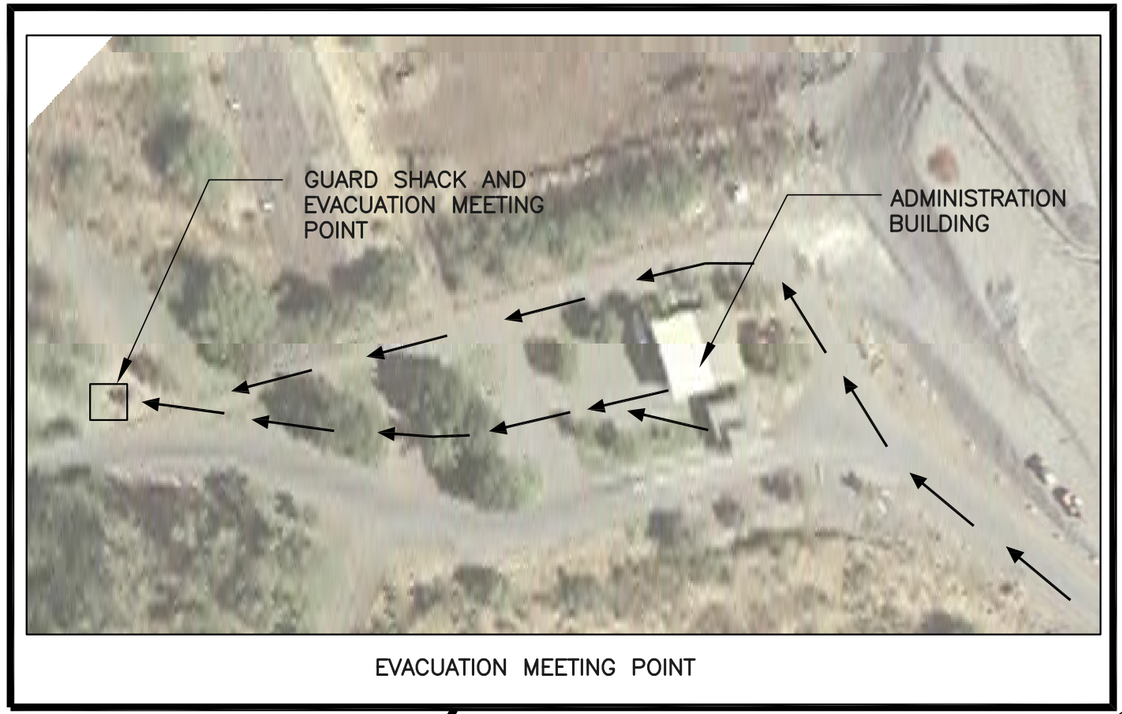
Figure 1

Site Location Map
Waimanalo Gulch Landfill
Kapolei, Hawaii

WMH 000070



EVACUATION MEETING POINT

LEGEND

← EVACUATION ROUTE

NOTES

DATE OF FLIGHT:
MAY 2006

LIMITS OF
AERIAL SURVEY

CONCRETE–LINED
DRAINAGE CHANNEL

GUARD SHACK AND
EVACUATION MEETING
POINT

MAINTENANCE AREAS

ADMINISTRATION
BUILDING

LANDFILL
GAS FLARE

PROPERTY
BOUNDARY

EASTERN HAUL
ROAD

SITE ENTRANCE

SCALEHOUSE
AND SCALES

PRIMARY ACCESS
HAUL ROAD

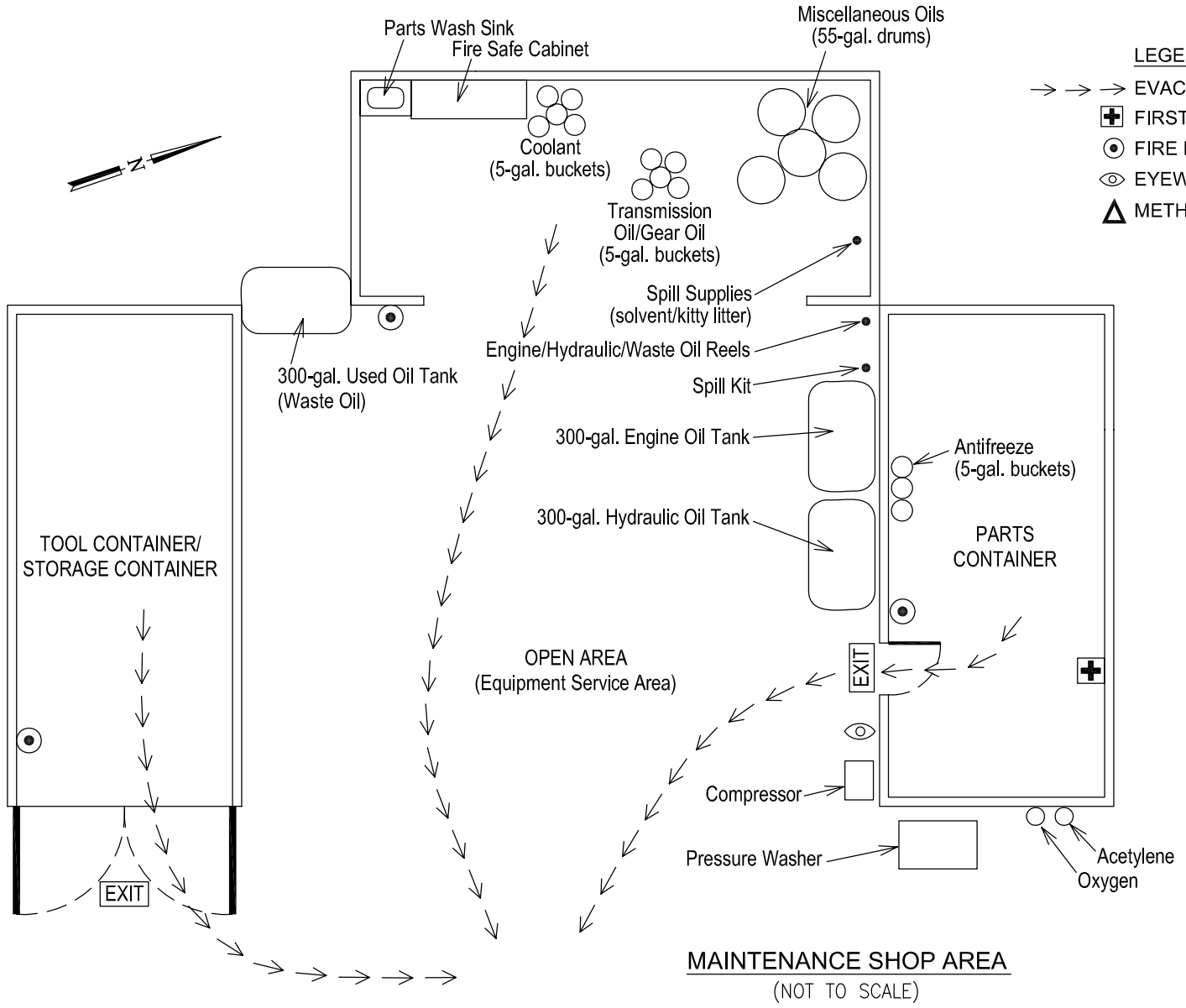
N

0 400

SCALE 1"=400' (APPROXIMATE)

WASTE MANAGEMENT

Figure 2
Evacuation Route Map
Waimanalo Gulch Sanitary Landfill
Kapolei, Oahu, Hawaii
WMH 000072



WASTE MANAGEMENT

FIGURE 2a

EMERGENCY ACTION PLAN

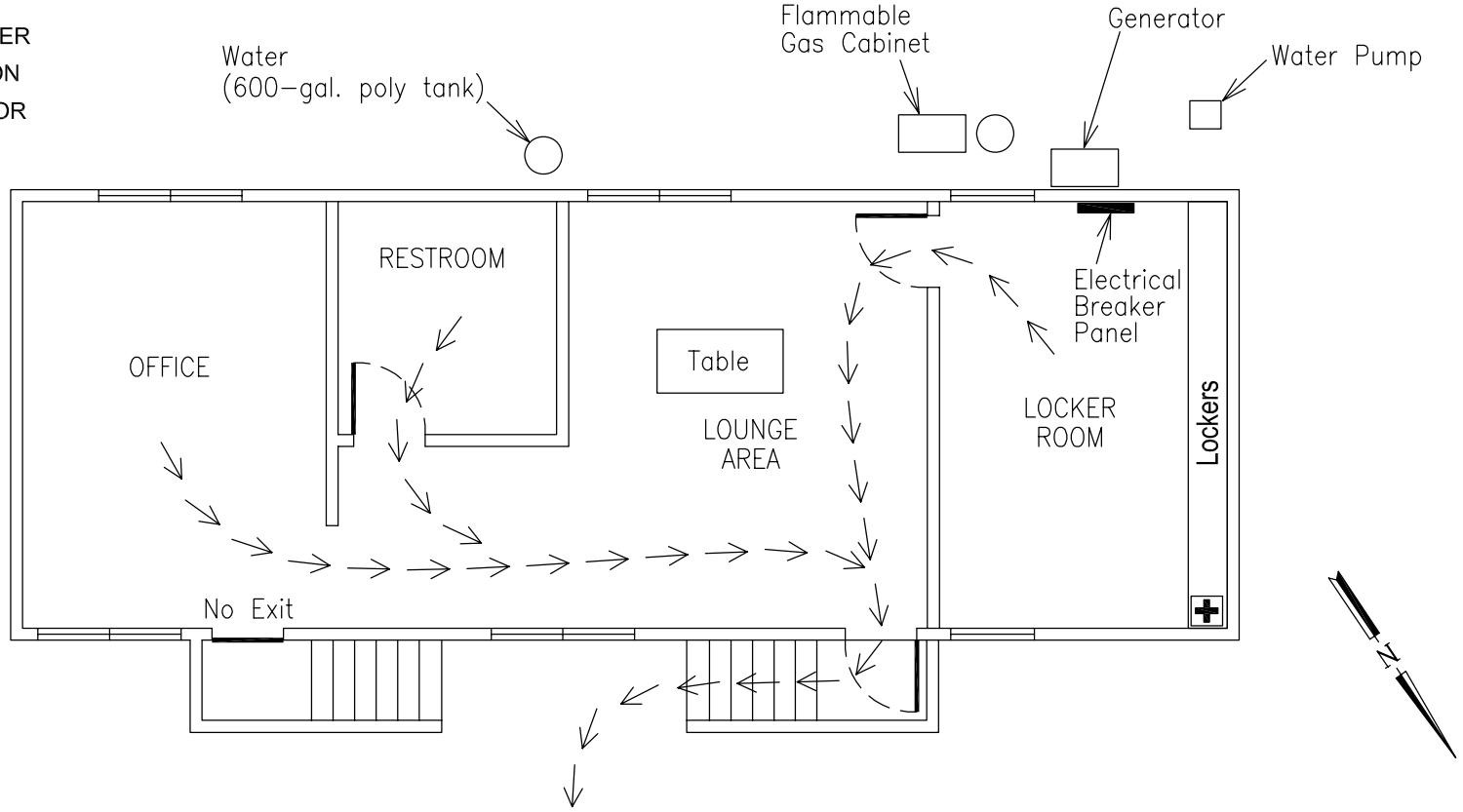
WAIMANALO GULCH SANITARY LANDFILL
OAHU, HAWAII

DATE: 03/19/07
FILENAME: SITE0207.DWG
PROJ. No. ...

WMH 000074

LEGEND:

- EVACUATION ROUTE
- FIRST AID BOX
- FIRE EXTINGUISHER
- EYEWASH STATION
- METHANE MONITOR



EMPLOYEE LOUNGE
TEMPORARY TRAILER
(NOT TO SCALE)

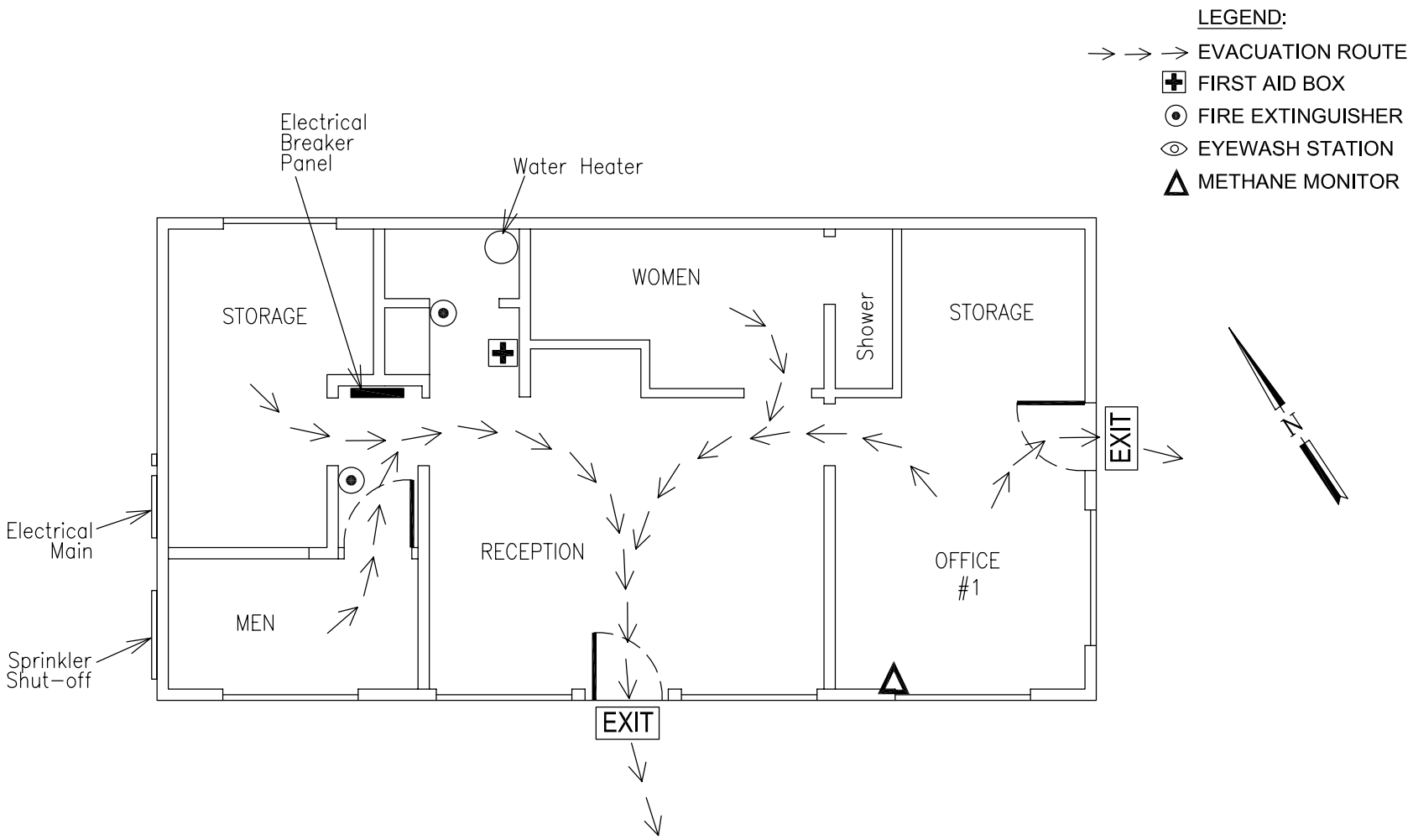
WASTE MANAGEMENT

FIGURE 2b

EMERGENCY ACTION PLAN

WAIMANALO GULCH SANITARY LANDFILL
OAHU, HAWAII

DATE: 03/19/07
FILENAME: SITE0207.DWG
PROJ. No. ...



ADMINISTRATION BUILDING
(NOT TO SCALE)

WASTE MANAGEMENT

FIGURE 2c

EMERGENCY ACTION PLAN

WAIMANALO GULCH SANITARY LANDFILL
OAHU, HAWAII

DATE:	03/19/07
FILENAME:	SITE0207.DWG
PROJ. No.	...

LEGEND:

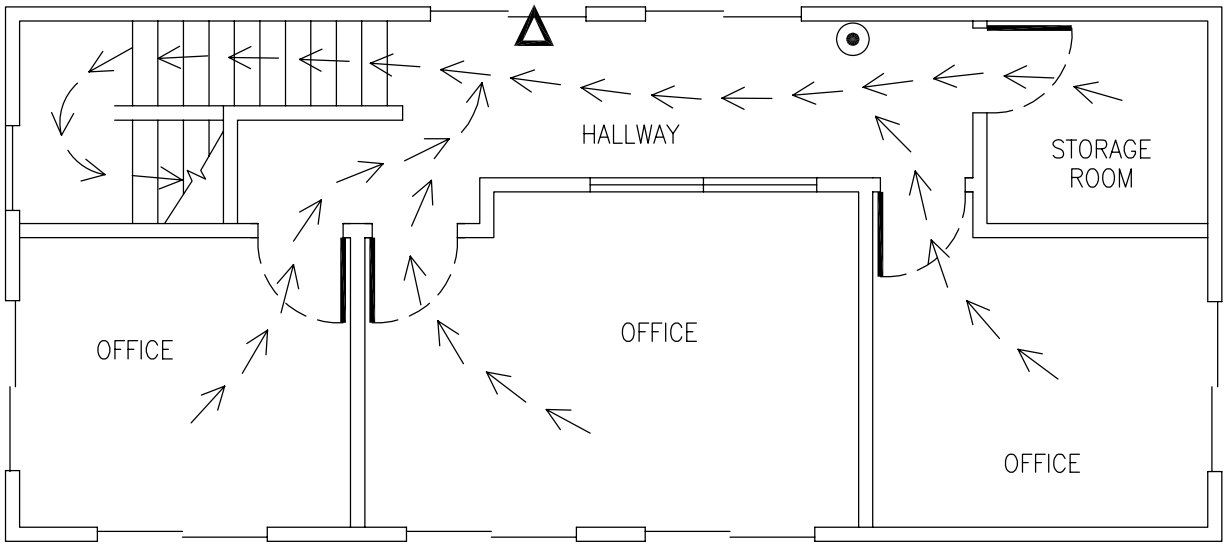
EVACUATION ROUTE

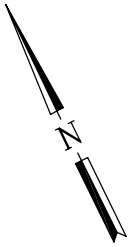
FIRST AID BOX

FIRE EXTINGUISHER

EYEWASH STATION

METHANE MONITOR





ADMINISTRATION OFFICE
2nd FLOOR PLAN
(NOT TO SCALE)

WASTE MANAGEMENT

FIGURE 2d

EMERGENCY ACTION PLAN

WAIMANALO GULCH SANITARY LANDFILL
OAHU, HAWAII

DATE: 03/19/07
FILENAME: SITE0207.DWG
PROJ. No. ...

LEGEND:

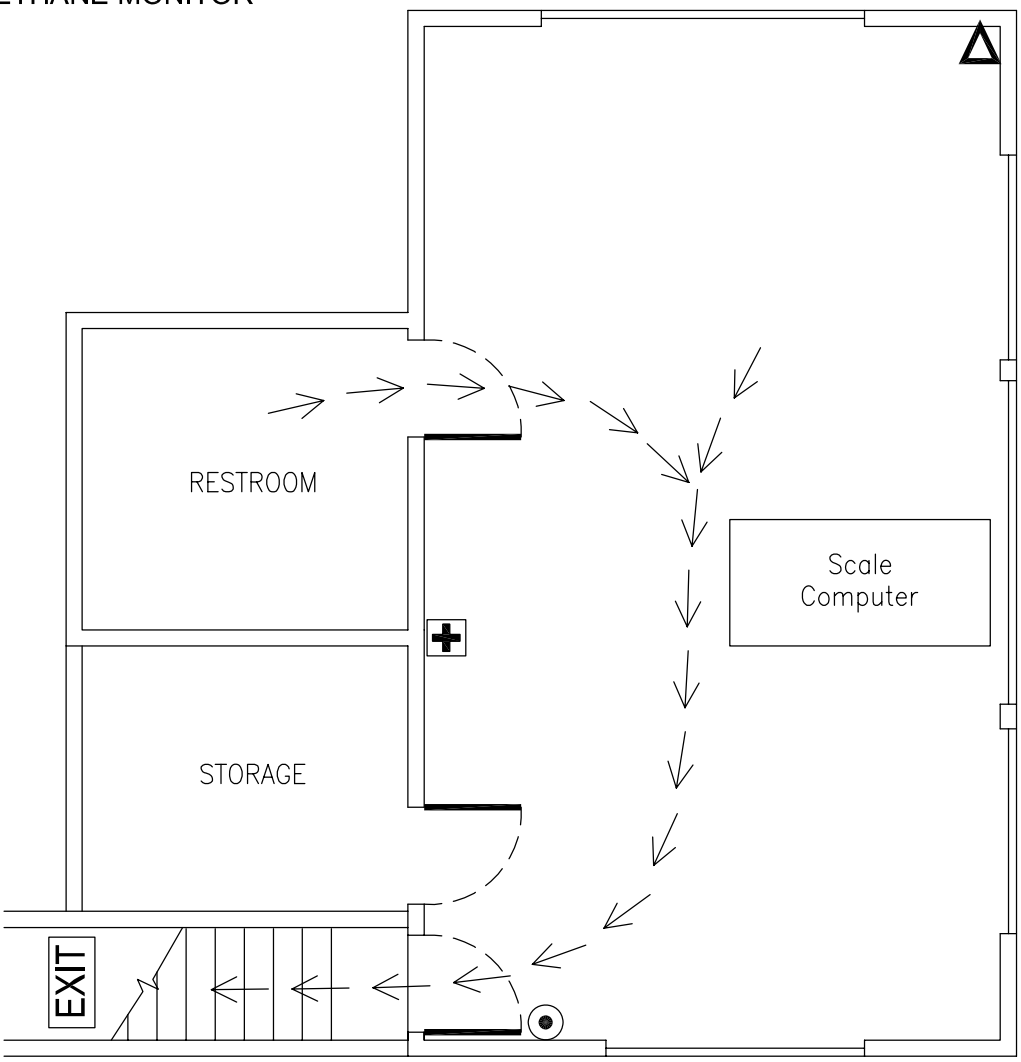
EVACUATION ROUTE

FIRST AID BOX

FIRE EXTINGUISHER

EYEWASH STATION

METHANE MONITOR



SCALE HOUSE
(NOT TO SCALE)

WASTE MANAGEMENT

FIGURE 2e

EMERGENCY ACTION PLAN

WAIMANALO GULCH SANITARY LANDFILL
OAHU, HAWAII

DATE: 03/19/07
FILENAME: SITE0207.DWG
PROJ. No. ...

2.0 EMERGENCY RESPONSE AGENCIES / TELEPHONE NUMBERS:

AMBULANCE	**911**
FIRE DEPARTMENT	**911**
POLICE DEPARTMENT	**911**
HIGHWAY PATROL	**911**

HOSPITAL: St. Francis Medical Center - West
91-2141 Ft. Weaver Road
Ewa Beach, HI 96706
(808) 678-7000

A map and driving directions to St. Francis Medical Center are included in this Plan (see Figure 3).

WGSL / WMH KEY PERSONNEL:

PRIMARY EMERGENCY COORDINATOR (EC):

Justin Lottig (WMH Environmental Protection Manager)
Office: (808) 668-2985 ext 16
Mobile: (808) 479-0749

ALTERNATE ECS:

Joseph R. Whelan (WMH Vice President / General Manager)
Office: (808) 668-2985 ext 15
Mobile: (808) 479-4612

Rick Kahalewai (WGSL Foreman)
Mobile: (808) 368-4717
Direct Connect: 184*2*54571

Natalie Corella (WGSL Operations Specialist)
Office: (808) 668-2985 ext 10
Mobile: (808) 306-5419
Mobile 2: (949) 521-3846
Direct Connect: 184*2409*13

Russell Nanod (WMH Community Affairs Manager)
Office: (808) 668-2985 ext 21
Mobile: (808) 479-5140

WM WEST GROUP KEY PERSONNEL:

Steven Powell (Safety Manager)
Office: (818) 935-2321

Len Butler (Director of Engineering)
Office: (303) 486-6044
Mobile: (303) 944-7508

Christian Colline (Director of Air Programs)
Home Office: (925) 673-6888
Mobile: (925) 890-2746

Brian Bowen (Director of Environmental Protection)
Office: (916) 552-5859
Mobile: (916) 704-0971
Home: (916) 344-2708

OTHER AGENCIES, UTILITIES AND RESPONSE SUPPORT PROVIDERS:

State Civil Defense:	(808) 733-4300
Oahu Civil Defense:	(808) 527-5476
American Red Cross:	(808) 734-2101
U.S. Coast Guard Terrorist Incident Reporting:	(808) 541-2450
Poison Center:	(800) 222-1222
Gas Company:	(808) 526-0066
Hawaiian Electric Company:	(808) 548-7961
EPA:	(415) 947-8000
FBI:	(808) 566-4300
Board of Water Supply:	(808) 748-5010
Environmental / Spill Clean Up (Chemtrec):	(800) 424-9300
National Spill Response Center:	(800) 424-8802
State of Hawaii -	
Clean Air Branch:	(808) 586-4200
Clean Water Branch:	(808) 586-4309
Environmental Management:	(808) 586-4337
Solid & Hazardous Waste:	(808) 586-4266
Hazard Evaluation & Emergency Response (HEER):	(808) 586-4249
After hours HEER number:	(808) 247-2191

Directions to Ewa Beach, HI 96706-1993

YAHOO! LOCAL Maps

Summary and Notes

START A **92460 Farrington Hwy, Kapolei, HI 96707-1629**

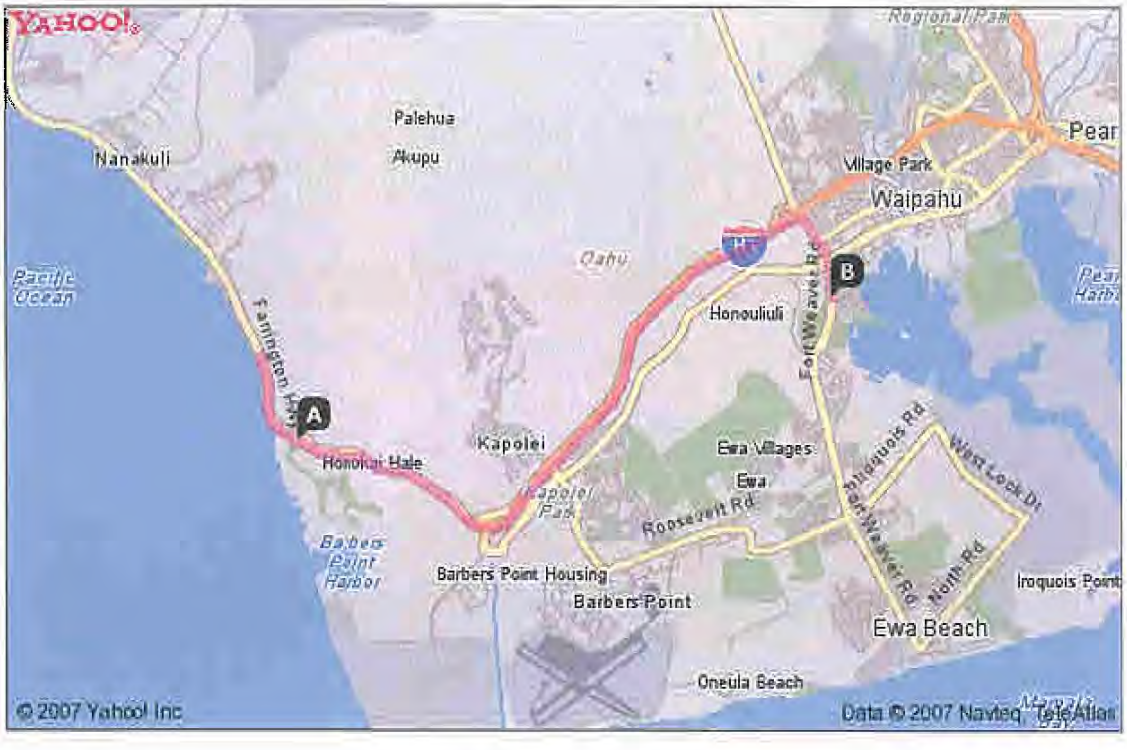
FINISH B **St Francis Medical Center (808) 678-7000**
91-2141 Fort Weaver Rd, Ewa Beach, HI 96706-1993

Total Distance: 11.1 miles, Total Time: 15 mins (approx.)

Add your notes here...

	Distance
A 92460 FARRINGTON HWY, KAPOLEI, HI 96707-1629	
1. Start at **92460 FARRINGTON HWY, KAPOLEI**	go **1.1** mi
2. Make a U-Turn on **FARRINGTON HWY**	go **3.4** mi
3. Continue on **I-H1 EAST**	go **5.3** mi
4. Take exit **#5/HI-750/HI-76** onto **FORT WEAVER RD** toward **WAIPAHU WEST**	go **1.3** mi
5. Arrive at **91-2141 FORT WEAVER RD, EWA BEACH**	
B 91-2141 FORT WEAVER RD, EWA BEACH, HI 96706-1993	

Distance: 11.1miles, Time: 15 mins



When using any driving directions or map, it's a good idea to do a reality check and make sure the road still exists, watch out for construction, and follow all traffic safety precautions. This is only to be used as an aid in planning.

WASTE MANAGEMENT

FIGURE 3

DIRECTIONS TO ST. FRANCIS MEDICAL CENTER

WAIMANALO GULCH SANITARY LANDFILL
OAHU, HAWAII

WMH 000086

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3.0 EMERGENCY PROCEDURES

Listed below are specific types of emergencies and detailed procedures to be followed by site personnel in the event of an emergency. After an emergency, waste disposal will resume at the WGSL only after key WM personnel have deemed the situation to be safe. WMH will ensure that human health and the environment are protected prior to restoring disposal services / operations in the aftermath of an emergency or disaster.

3.1 EVACUATION PROCEDURE

All personnel on-site will be notified of the evacuation via telephones, cell phones, and/or hand-held two-way radios. If radios/phones are not operational, personnel will be alerted verbally (the EC and/or EC alternates will verbally alert all WGSL personnel).

EVACUATING THE BUILDINGS:

- Walk, don't run to the nearest exit. Personnel and visitors will be directed to immediately reconvene at the WGSL evacuation area (via the safest route), which is the **GRASS AREA BY THE GUARD SHACK, NEAR FARRINGTON HIGHWAY** (see Figure 1).
- Upon evacuation, the Operations Specialist will bring the contractor sign-in log to the evacuation point (located in the office reception area, on the counter in front of the Operations Specialist). This to identify any visitors present on-site.
- EC Alternates will be responsible for checking the facilities to insure that everyone leaves the buildings.
- If outside emergency support is required, call 911 and report the emergency. Inform the 911 operator that there is an emergency and give the following information:
  - ✓ Caller's name and location.
  - ✓ Type of emergency.
  - ✓ Type of emergency aid required.

  Answer any questions that the emergency operator asks. Stay on the phone with the operator until told to hang up.

EVACUATING THE LANDFILL:

- Administration personnel will contact the on-site Goodfellow Bros. construction office at via cellular phones and Goodfellow Bros. will then radio their personnel & give the order to evacuate.
- Site personnel will coordinate movement of landfill customers/ waste haulers from the disposal area onto the main haul road. Construction personnel will do the same. All persons will then proceed to the designated evacuation area at the **GRASS AREA BY THE GUARD SHACK, NEAR FARRINGTON HIGHWAY** (see Figure 1).

The EC (or Alternate EC) will be responsible for:

- ✓ Coordinate evacuation of the WGSL including notification of adjacent property owners/tenants, as required.
- ✓ Coordinate with incoming emergency response personnel.
- ✓ Conduct a head count at the designated assembly area/evacuation point.
- ✓ Notify incoming drivers/haulers via radio or cell phone to avoid the site.
- ✓ Notify WGSL / WMH Management of the emergency.
- ✓ Notify WM Safety personnel of the emergency (if appropriate) - determine if a 24-Hour Report is required.
- ✓ Determine when the "all clear" signal can be given to return to the site.

3.2 FIRE PROCEDURE

Procedures outlined below will be followed for emergencies involving fire, including structure of large surface fires, buffer zone fires, incoming waste load fires, landfill subsurface fires, and equipment fires. A 5,000-gallon water truck and bulldozers are available 24-hours a day to aid in fire fighting. Fire extinguishers are provided in all buildings and site vehicles for use in extinguishing small fires.

3.2.1 STRUCTURE FIRE OR SURFACE FIRE

The EC will notify all personnel on-site at the WGSL of the fire via oral information and/or hand-held radios. If possible, cell phone communication will be established.

In the event of a **LARGE STRUCTURE FIRE** or **SURFACE FIRE**:

1) Assess the fire - Identify its location, source and size.
2) If the fire is **SMALL** (less than 1 cubic yard), can be approached safely with an evacuation route, and available personnel are trained in the appropriate use of fire equipment, an attempt can be made to put it out with a fire extinguisher. **DO NOT ATTEMPT TO FIGHT THE FIRE ALONE**.
3) If the fire is **LARGE, EVACUATE THE BUILDING IMMEDIATELY** and proceed to the designated evacuation area. Avoid entering a burning structure for any reason.
4) Call 911 to report the fire. Inform the 911 operator that there is a fire emergency and give the following information:
   - ✓ Caller's name and location.
   - ✓ Location of fire.
   - ✓ Materials involved, if known.
   - ✓ Whether medical aid is required.
5) Limit access to area and isolate electrical power at main breaker
6) Remove vehicles from the area if time allows and does not present a risk to personnel.

7) Remove fuel sources (i.e. flammables from shop) if time allows and does not present risk personnel.

Upon arrival of local Fire Department personnel, direct them to the fire and provide assistance as appropriate.

3.2.2 BUFFER ZONE OR BRUSH FIRE

If a brush fire / buffer zone fire exists in the area surrounding the landfill, maximum effort will be made to prevent the fire from reaching refuse fill areas by utilizing on-site assets.

IN THE EVENT OF A BUFFER ZONE OR BRUSH FIRE:

1) Maintain existing firebreaks between waste fill areas and surrounding vegetation. Roads are maintained on the landfill perimeters, which also serve as a firebreak.
2) Excavate additional firebreaks between the landfill and the oncoming fire. Excavated soils will be bermed on the fire side of the firebreak for additional protection.
3) Water down areas between the firebreak and the disposal area using the on-site water trucks.
4) If fire threatens the landfill, daily cover will be put on the active face and it will be wetted down to prevent a landfill fire caused from flying cinders.
5) Equipment and fuel sources will be moved to safe locations as practicable
6) Unnecessary personnel will be evacuated from the site/area.
7) The local Fire Department will be summoned if site personnel and equipment cannot extinguish the fire.

3.2.3 INCOMING WASTE LOAD FIRES

Scale house attendants and WGSL operations personnel are trained and directed to notice any smoke, steam, heat, or burning material in incoming waste loads, and prevent it from contacting combustible materials or being buried at the working face before all combustion is extinguished.

If there is a **FIRE IN AN INCOMING WASTE LOAD** or if a **FIRE OCCURS AT THE DISPOSAL AREA**:

1) Determine the source of the fire.
2) If fire is small put out with fire extinguisher.
3) Cut the fire out the active face with a dozer (excavate) and move (separate) burning waste from the disposal area to the table. Isolate the fire before it spreads.
4) Smother the fire by covering it with soil. The faster that soil can be placed over the fire, the more effective this method will be in controlling and extinguishing the fire.
5) If necessary, apply water from the on-site water truck to soak the fire.
6) Spread the to ensure fire is out and does not reflash.

7) Call 911 and summon the local Fire Department if site personnel and equipment cannot extinguish the fire.

3.2.4 VEHICLE OR EQUIPMENT FIRE

To avoid equipment fires, do not operate equipment with trash, paper or other objects in or near the engine compartment. Always stay alert – watch for hot spots in the equipment, blistering paint, or other signs of a fire (smoke or the smell of smoke). If detected, contact WGSL Management or other operations personnel via two-way radio immediately.

In the event of a **VEHICLE OR EQUIPMENT FIRE**, the operator will:

1) Alert WGSL Management / personnel via two-way radio immediately.
2) Bring the vehicle or equipment to a safe stop. If safe to do so, the vehicle/equipment should be parked away from fuel supplies, uncovered solid wastes, or other machinery.
3) Immediately (or as soon as possible) shut off the engine and engage the brake to prevent movement of the vehicle / equipment.
4) Get out of the equipment.
5) Attempt to control the fire using fire extinguishers or an on-site water truck (depending on the size of the fire). If unable to control the fire, follow the procedures for calling 911 as detailed in Section 3.2.1 above, and summon the help of the local fire department.

In the event of any of the above-mentioned fires, the EC will:

- ✓ Assess the situation and possible hazards that may result.
- ✓ Order evacuations, medical care, shutdowns, etc. (as necessary).
- ✓ Notify adjacent property owners/tenants (as necessary).
- ✓ Coordinate with incoming emergency response personnel.
- ✓ Conduct a head count at the designated evacuation point.
- ✓ Notify incoming drivers/haulers via radio or cell phone to avoid the site.
- ✓ Notify WGSL / WMH Management of the emergency.
- ✓ Notify WM Safety personnel of the emergency (if appropriate) - determine if a 24-Hour Report is required.
- ✓ Determine when the “all clear” signal can be given to return to the site.

3.2.5 LANDFILL SUBSURFACE FIRE

There are two primary causes of subsurface fires at landfills:

1) When smoldering waste is buried at the working face. Typically, this occurs at relatively shallow depths and is detected by surface expression such as visible smoke or depressions forming in recently placed waste.
2) When excess oxygen is allowed to enter the waste mass. This may occur at any depth depending on the oxygen source. At relatively shallow depths, visible smoke and surface depressions are likely. If the fire is deep, it is more likely to burn slowly without visible flame

or large quantities of smoke, and is characterized by rapid oxidation of an organic waste. The only evidence may be elevated temperatures within the landfill gas (LFG) collection wells, which are generally accompanied by elevated carbon monoxide levels, high balance gas-to-methane ratios, low methane-to-carbon dioxide ratios, and increased oxygen levels. Underground combustion/oxidation may go undetected until a sinkhole or smoke appears.

The methods used to **EXTINGUISH THE NEAR SURFACE FIRE** may include:

(1) Cutting off the oxygen supply by smothering with fine-grained soil and/or the use of plastic membranes; or

(2) Physically putting the fire out, which involves excavating down to the fire, removing and extinguishing burning material, confirming that all burning material is extinguished, and placing waste back into the excavation area. *This procedure should only be done under supervision of personnel experienced with extinguishing landfill fires.*

The primary method used to **EXTINGUISH SUBSURFACE COMBUSTION WITHIN THE LANDFILL** is to smother the smoldering area. Typically this can be accomplished by reducing or cutting off vacuum to any affected LFG control well(s). Normally this is sufficient to suffocate the fire and no further steps are required. At the same time, the landfill surface should be inspected to verify that cover thickness is adequate and that excess air is not entering the landfill. If excess air entry is suspected, additional cover should be placed or a reinforced geomembrane liner used. The geomembrane, once installed, will significantly reduce the flow of air into the landfill.

Combustion is considered extinguished when temperatures begin to decrease, coupled with a decreasing balance gas-to-methane ratio, and an increasing methane-to-carbon dioxide ratio. Due to a decreasing oxygen supply, carbon monoxide levels may increase during this period.

In the event of deep combustion, limiting access to the affected area is not necessary provided there are no visible surface indications of the fire (subsidence or smoke). No new waste may be placed within 250 feet of the suspected combustion area, unless separated from the surrounding waste by 3 feet of soil or other nonflammable material.

If a landfill subsurface fire is suspected at the WGSL, WM's West Group Director of Engineering, Director of Environmental Protection, and Director of Air Programs will be notified.

CRITERIA FOR INTERNAL& DOH NOTIFICATION:

- The presence of smoke coming from the landfill (requires immediate notification).
- The presence of visible fire (requires immediate notification).
- Sudden subsidence, typically less than 25 feet across, particularly in areas recently filled. Irregular subsidence due to factors other than fires is common at landfills. When there is any doubt regarding why an area has subsided, WM West Group Engineering and Environmental Protection will be consulted to determine whether the presence of a fire is likely.
- Carbon monoxide concentrations > 100 ppm in any LFG collection well.
- Methane-to-carbon dioxide ratio less than 1.0.

- LFG well head temperatures over 160 °F.
- Balance gas-to-methane levels above 0.6.

Once a fire has been verified, the Hawaii Department of Health (DOH) shall be notified orally within 24 hours and a detailed plan outlining steps to control the fire shall be provided, in writing, within 7 days.

The response required will be determined by the location of the fire. No personnel shall be permitted within the area until it is confirmed that the fire is extinguished, and the area is determined to be safe. No waste may be placed within 200 feet of the suspected fire area (without Group Engineering approval) until it is confirmed that a fire is not present or that the fire has been extinguished.

3.3 MEDICAL EMERGENCY PROCEDURE

3.3.1 INJURY ACCIDENT RESPONSE PROCEDURES

If an accident occurs, WGSL Management should be notified immediately. First aid kits are maintained in all buildings on-site, at the maintenance shop, and in all site vehicles (see Figures 2a-2e). If you are properly certified, begin first aid (e.g. stop bleeding, begin CPR, etc.). Do not move the victim unless necessary to prevent further injury. If the nature of an injury requires additional treatment, the local emergency response provider is to be notified by dialing 911. The person making the call should inform the operator of:

a) The nature and location of the emergency;
b) What first aid measures have been initiated;
c) The need for any special equipment, i.e. hazardous materials response, confined space rescue, or vehicle extrication.

Persons with major injuries should never be moved without professional assistance. Major injuries include second or third degree burns, unconsciousness, severe bleeding, broken limbs, and any head, back, or neck injury.

Records of all site accidents and first aid treatments will be maintained at the WGSL office. Accident reports will be filed with insurance companies and State agencies as required.

After the situation has stabilized, WGSL Management will arrange for investigation of the cause of the accident. A complete investigation report should be completed within seven days of the incident. The report should include a review of the actions leading up to the incident, factors that contributed to or mitigated the severity of the incident, and recommendations to prevent reoccurrence.

<u>The EC will be responsible for:</u>

- ✓ Coordinating with incoming emergency response personnel.
- ✓ Notifying WGSL / WMH Management of the emergency.

- ✓ Notifying WM Safety personnel of the emergency (if appropriate) - determine if a 24 Hour Report is required.
- ✓ Notifying OSHA or other regulatory agency if required.

3.4 SPILL/RELEASE RESPONSE PROCEDURE

In the event of a spill/release, immediately alert all personnel in the area and notify the EC (WGSL District Manager) and/or WGSL Management. If necessary, secure the facility and evacuate to an upwind area or designated evacuation point. The WGSL has a low potential for spills of hazardous materials, but incidents are possible in the event of vehicle accidents or malfunctions that could cause spills of coolant, fuel, or lubricants.

3.4.1 MINOR SPILL

A release is considered "minor" if it extends outside the secondary containment provisions and the spill/release is limited to the immediate area with no potential for it to enter into the existing drainage facilities or for it to present an immediate fire hazard or exposure danger.

In the event of a minor spill/release, WGSL personnel will:

1. Secure the area to protect all personnel and public from any immediate danger.
2. Extinguish any sources of ignition. Vehicles should be turned off. Avoid sparks, movement, or any activity that may create static electricity.
3. **ENSURE THAT NO DANGER TO HUMAN HEALTH EXISTS,** and then stop the flow at the source only if it is safe to do so (e.g., shut off power, turn off valves, plug leaks). No site personnel shall come into contact with unknown or hazardous substances that have been brought into the facility.
4. If it is safe to do so and available personnel are trained in the proper use of required personal protective equipment (PPE), contain the spill with soil berms, equipment from the spill kit (i.e., absorbent pads, particulate sorbent, shovels, hand tools, etc.) and /or block off drains downstream. Used sorbent pads will be collected in a drum for proper disposal.

3.4.2 MAJOR SPILL

WGSL personnel are not trained as first responders in the event of a major spill/release. A spill/release is considered "major" if it extends outside the secondary containment provisions and the spill has traveled beyond the immediate area or if the spill/release has entered the existing drainage facilities.

In the event of a major spill/release of petroleum products, WGSL personnel will:

1. Secure the area to protect all employees and public from any immediate danger.
2. Extinguish any sources of ignition. Vehicles should be turned off. Avoid sparks, movement, or any activity that may create static electricity.

3. **ENSURE THAT NO DANGER TO HUMAN HEALTH EXISTS,** and then stop the flow at the source only if it is safe to do so (e.g., shut off power, turn off valves, plug leaks).
4. Call 911 to alert the fire department or the emergency response clean-up contractor (Unitek Environmental - 808-834-1444) and give the following information:
    - ✓ Caller's name and location.
    - ✓ Location of spill.
    - ✓ If known, materials and volumes involved.
    - ✓ Whether medical aid is required.
    - ✓ Whether fire hazard exists.

The EC (or manager in charge) will be responsible for:

- ✓ Coordinating with incoming emergency response personnel.
- ✓ Notifying WGSL / WMH Management of the emergency.
- ✓ Notifying WM Safety personnel of the emergency (if appropriate) - determine if a 24 Hour Report is required.
- ✓ Notifying the WMH Environmental Protection Manager who will then report the incident to the proper regulatory agencies and arrange for the proper disposal of any waste materials (if necessary). The waste material from the cleanup will be characterized, transported, and disposed of according to State and Federal Regulations. Refer to the *WGSL SPCC Plan* (Volume I – Section IV) for more information regarding spills and spill response.

3.5 EARTHQUAKE

A "significant earthquake" is defined here as one that produces any sign of damage to on-site structures, including but not limited to, overturned furniture, wall cracks, or structural shifts.

DURING A SIGNIFICANT EARTHQUAKE:

- ✓ Remain calm.
- ✓ Immediately cease or limit landfilling operations.
- ✓ If indoors, stay there. Hazards and injuries are generally caused by objects that fall due to the shaking. Move quickly away from windows, shelves, cabinets and glass partitions. Get under a desk or table, or sit in an interior doorway or corner. Do not leave the building unless the building is unsafe.
- ✓ If outdoors, get to an open area away from structures, power lines, and trees.
- ✓ If driving, pull over to the side of the road and stop. Avoid overpasses and power lines. Stay inside vehicle until shaking has stopped.
- ✓ If in a crowded public place, do not rush for the doors. Crouch and cover head with hands and arms.

AFTER THE EARTHQUAKE:

- ✓ Unless there is an immediate life-threatening emergency, do not attempt to use the telephone.
- ✓ Promptly (when it is safe to do so) conduct a visual survey of the site to identify any slope failures, downed power lines, gas and water leaks, broken electrical wiring or sewage lines fires, LFG system failures, tank leaks/spills, or other conditions that could threaten worker or public safety.
    - If there is damage, turn the utility off at the source. Immediately report gas leaks to the utility company. Do not re-open gas valve until the utility company has checked the system.
    - Warn others to stay away.
    - If fires occur, follow the procedures set forth in Section 3.2.
    - If injuries occur, follow the procedures set forth in Section 3.3.
    - In the event of inoperable telephone systems, notification of the appropriate agencies/businesses will be accomplished in the most expedient manner available (cellular/mobile phones, person to person, overnight mail, etc.).
- ✓ Check buildings for cracks and damage including the roof and foundation.
- ✓ Turn on portable radio for instructions and news reports. Cooperate fully with public safety officials and instructions.
- ✓ Do not use vehicles unless there is an emergency. Keep the streets clear for emergency vehicles.
- ✓ Be prepared for aftershocks.
- ✓ Remain calm and lend a hand to others.
- ✓ If the site is evacuated, leave a message telling others where personnel can be found.

The EC (or manager in charge) will be responsible for:

- ✓ Coordinating evacuation of the WGSL including notification of adjacent property owners/tenants, as required.
- ✓ Coordinating with incoming emergency response personnel.
- ✓ Conducting a head count at the designated evacuation point.
- ✓ Notifying incoming drivers/haulers via radio or cell phone to avoid the site.
- ✓ Notifying WGSL / WMH Management of the emergency.
- ✓ Notifying WM Safety personnel of the emergency (if appropriate) - determine if a 24-Hour Report is required.
- ✓ Determining when the “all clear” signal can be given to return to the site.
- ✓ Notifying the WMH Environmental Protection Manager who will fill out Post-Earthquake Forms (Appendix B) and report the incident to the proper regulatory agencies (if necessary).

3.6 SEVERE STORM RESPONSE PROCEDURES

The WGSL is not located within a 100-year floodplain area as delineated by the Federal Emergency Management Agency (FEMA) of the Federal Insurance Administration *(Floodplains),* or within a tsunami hazard or floodway. The following measures will be taken to protect against excessive erosion, flooding, and wind damage before and during severe storms.

PRIOR TO A FORECASTED STORM:

- ✓ WGSL personnel will inspect all drainage on-site structures to verify that they are in working order.
- ✓ Excessive silt in ditches and basins will be removed and the condition of pipes and discharge structures from basins will be verified.
- ✓ Diversion berms will be constructed around the current disposal area as needed to prevent run-on from entering the waste fill, and to prevent runoff from the waste fill areas of the site.
- ✓ Interim cover will be placed over exposed waste at the end of the working day prior to the forecasted beginning of a severe storm.

At the discretion of WMH Management, the site may be closed for business during storm periods. In this event, the working face will be closed and covered with interim cover and graded to direct run-off to the drainage features of the surface water management system.

The WMH Environmental Protection Manager conducts monthly surface water and storm water inspections, which include checking and monitoring the integrity of the site's drainage systems. A Severe Storm Inspection (Post-Hurricane / Severe Storm Forms [Appendix B]) will be conducted, if necessary, during any prolonged storm event to correct or repair any conditions that have been damaged or that may cause damage to on-site or off-site facilities. Excessive silt/sediment will be excavated out of the sedimentation basin and drainage channel/ditches as necessary.

3.7 HURRICANES

Hurricane season occurs from June through November in the northern hemisphere. Typically, the National Weather Service provides 24 to 48 hour warnings before a hurricane is likely to approach. There are two types of warnings – "Hurricane Watch" is notice that is given when hurricane conditions threaten within 24 to 26 hours; "Hurricane Warning" is notice that is given when hurricane conditions are expected within 24 hours or less. Typically, waste management facilities support cleanup efforts by providing disposal capacity for debris and other solid wastes generated by the hurricane. Demands on solid waste management facilities are highest immediately following the hurricane and through the early phase of recovery. Local authorities and emergency coordinators rely on waste management facilities to provide capabilities and capacities for waste management so a prioritized and coordinated cleanup can begin as quickly as possible.

ONCE A "HURRICANE WATCH" IS ISSUED:

Hurricanes and storms may generate contaminated debris or other atypical wastes that require special handling, processing, or disposal procedures that are not addressed by the facility permit and require special approval for disposal from the DOH SWS. After the potential effects of a hurricane are verified by local authorities (i.e., severe flooding, storm surge, high winds, etc.), the WGSL will consider acquiring supplies and materials (fuel, additional soil cover or alternate material, vehicles, heavy equipment, grinder/chippers, auxiliary lighting, pumps, generators, fire suppressant equipment, rain gear, personnel protective equipment, etc.) to ensure adequate equipment to handle the increase in waste and ensure airspace availability.

In the event of a hurricane making landfall on the island of Oahu, WGSL personnel will perform the following as preparation:

- ✓ Conduct a briefing to entire staff on the status of conditions & severity of the hurricane and how it may impact the facility and service area / region. Discuss emergency operating procedures for facility.
- ✓ Power outages should be anticipated and procedures will be employed (when the WGSL re-opens to accept waste) as needed to manually track the date the waste was received, the quantity by weight or volume, and the origin of the waste.
- ✓ Inspect all drainage on-site structures to verify that they are in working order.
- ✓ Excessive silt in ditches and basins will be removed and the condition of pipes and discharge structures from basins will be verified.
- ✓ Diversion berms will be constructed around the current disposal area as needed to prevent run-on from entering the waste fill, and to prevent runoff from the waste fill areas of the site.
- ✓ Interim cover will be placed over exposed waste at the end of the working day.
- ✓ Holding capacity of leachate tanks and/or ponds will be increased to ensure additional volumes added during storm events can be accommodated.

ONCE A "HURRICANE WARNING" IS ISSUED:

- ✓ The EC (or manager in charge) will track the hurricane front (via radio, television, internet, etc.) and implement the following procedures to properly shutdown all operations at the WGSL:
  - If possible, all electrical lines/breakers/gas valves should be shut down to prevent any potential fires. Unplug all appliances.
  - Secure facility property, structures, landfill equipment, and office (preserve records and data [electronic and hard copies]) in case of flooding or power failure. Anything that is not secured may become a damaging projectile in the event of high winds. Cover all windows with wood panels (if possible).
  - Check batteries and stock up on canned food, first aid supplies, and drinking water.
  - Gas up vehicles, generators, and emergency tanks.

- ✓ WGSL Management will require that site personnel return to their homes. If on-site, evacuate to the main office building and stay there (shelter in place) – stay away from windows.

AFTER THE HURRICANE:

- ✓ WGSL / WMH Management will promptly (when it is safe to do so) conduct a visual survey & damage assessment of the site to identify any compromised building structures, slope failures, downed power lines, gas and water leaks, broken electrical wiring or sewage lines fires, LFG system failures, tank leaks/spills, or other conditions that could threaten worker or public safety.
    - If you smell gas, leave the area immediately, notify the utility company, and warn others to stay away. Do not re-open gas valve until the utility company has checked the system. Do not go wading through high waters – power / electrical lines may be down in the water.
    - If fires occur, follow the procedures set forth in Section 3.2.
    - If injuries occur, follow the procedures set forth in Section 3.3.
- ✓ Turn on portable radio for instructions and news reports. Cooperate fully with public safety officials and instructions.
- ✓ Do not use vehicles unless there is an emergency. Keep the streets clear for emergency vehicles.
- ✓ Remain calm and lend a hand to others.
- ✓ If the site is evacuated, leave a message telling others where personnel can be found.

The EC (or manager in charge) will be responsible for:

- ✓ Ensuring that WGSL safety programs are fully implemented.
- ✓ Coordinating evacuation of the WGSL including notification of adjacent property owners/tenants, as required.
- ✓ Communicating with the City & County of Honolulu and the State of Hawaii, as well as local authorities and emergency response personnel to inform them:
    1) When the WGSL becomes operational after the storm;
    2) The situation at the WGSL, such as waste storage capacity, transportation coordination, site conditions, personnel status, etc.

  In the event of inoperable telephone systems, notification of the appropriate agencies/businesses will be accomplished in the most expedient manner available (cellular/mobile phones, person to person, overnight mail, etc.).
- ✓ Notifying incoming drivers/haulers via radio or cell phone to avoid the site.
- ✓ Notifying WM Safety personnel of the emergency - determine whether a 24-Hour Report is required.

- ✓ Conducting a Post-Hurricane Inspection (Post-Hurricane / Severe Storm Forms [Appendix B]).

Hurricanes leave behind debris made up of construction materials, damaged buildings, sediments, green waste, and personal property. Hurricane debris obstructs roads and disables electrical power and communication systems over wide areas. The goals of post-hurricane efforts will be to increase debris diversion rates, minimize environmental impacts, reduce waste management costs, minimize threats to health and safety, and shorten the duration of the cleanup effort. WMH may be asked to provide assistance at collection sites across the island to monitor incoming debris. These efforts will be coordinated with the DOH or emergency response personnel.

3.8 Bomb Threat (Phone Call)

The most basic preventative measures are properly securing a facility so that an explosive device cannot be easily placed without detection.

A higher probability of bomb threats due to a history of past threats, a neighborhood or community trend, or a situation involving a particularly vengeful individual may warrant more extensive measures such as more stringent security, training programs, package instructions, more involved search and evacuation procedures, and recorders on appropriate telephones. Such a high probability will also warrant more contact with local law enforcement authorities. The WGSL does not have a high probability of bomb threats.

When the Threat is Called In:

a) Listen while the caller talks and fill out the attached bomb threat call checklist.

b) Inform the caller that the building is occupied and that the detonation of a bomb could result in death or serious injury to many innocent people.

c) Attempt to determine the location and description of the bomb and time of detonation. Obtain as much information as possible including time of call, background noise, etc.

d) Notify the WGSL District Manager or other on-site manager.

e) WGSL Management will report the bomb threat to local police department.

f) Search the area if time permits. Do not touch any suspicious items. Report any suspicious items to the WGSL District Manager and the local police department.

g) Evacuate the area where any suspicious items are located.

3.9 Civil Disturbance/Demonstration

- ❖ Do not become a spectator. Leave the area of the disturbance to avoid injury or arrest.
- ❖ Lock all doors, gates, and windows. Close all drapes and avoid window areas. Do not argue with or agitate the participants.
- ❖ Remain calm, be courteous and do not do anything to provoke an incident.

- Contact the WGSL District Manager and local police department as soon as possible.
- If required to protect employees and company property, service may have to be limited and/or access to the building may have to be restricted.
- Keep telephone lines open and avoid unnecessary inquiries regarding the incident.

3.10 ARMED ROBBERY

- If confronted by an armed robber, do not argue with the individual.
- Give the individual what he wants. Do not block his option to escape.
- Remember what you can about the incident including individual's height, weight, hair length, color of eyes, color of hair, race, distinguishing marks or scars. If a weapon or vehicle is visible, try to remember as much detail about it as possible.
- After the incident is over, call the police immediately.
- Under no circumstances should you try to intercede or stop the robbers involved in the incident.

BOMB THREAT CALL CHECKLIST:

Date: _____ Time: _____ A.M. / P.M.

Call Received by: _____

Exact words of caller: _____

_____

_____

_____

Questions to Ask:

When will bomb explode? _____

Where is the bomb located? _____

What does the bomb look like? _____

What kind of bomb is it? _____

Why did you place the bomb? _____

What do you hope to accomplish by this action? _____

What is your name? _____

Where are you calling from? _____

Voice Characteristics:

Male ____ Female ____ Child ____ Loud ____ Soft ____ Nasal ____

Raspy ____ High ____ Low ____ Familiar ____ Pleasant ____

Other _____

Speech Characteristics:

Fast ____ Slow ____ Stutter ____ Slurred ____ Intoxicated ____

Other _____

Accent Characteristics:

Local ____ Region ____ Foreign ____

Other _____

Manner of Caller:

Calm ____ Angry ____ Deliberate ____ Emotional ____

Laughing ____ Incoherent ____ Other _____

Background Noises:

Office Machines ____ Street Traffic ____ Factory Machines ____ Music ____

Airplanes ____ Trains ____ Trucks ____ Animals ____

Other _____

Origin of Call:

Internal ____ External ____ Local ____ Long Distance ____

Did caller appear to be familiar with the facility? _____

Number/extension at which call was received: _____

Contacts Made:

Operations/District Manager: Date _____ @ _____ am / pm

Police Department: Date _____ @ _____ am / pm

Fire Department: Date _____ @ _____ am / pm

Other: Date _____ @ _____ am / pm

Other: Date _____ @ _____ am / pm

3.11 TERRORIST THREATS

IN THE OFFICE:

- ✓ Close business.
- ✓ If there are customers or visitors in the building, provide for their safety by asking them to stay – not leave. When authorities provide directions to shelter-in-place*, they want everyone to take those steps immediately, where they are, and not drive or walk outdoors.

  *Note: One of the instructions you may be given in an emergency where hazardous materials may have been released into the atmosphere is to shelter-in-place. This is a precaution aimed to keep you safe while remaining indoors (this is not the same thing as going to a shelter in case of a storm). Shelter-in-place means selecting a small, interior room, with no or few windows, and taking refuge there. It does not mean sealing off your entire home or office building.

- ✓ Unless there is an imminent threat, ask employees, customers, and visitors to call their emergency contact to let them know were they are and that they are safe. Turn on call-forwarding or alternative telephone answering systems. Change the recording on voice mail to indicate that the business is closed, and that staff and visitors are remaining in the building until authorities advise it is safe to leave.
- ✓ Close and lock all windows, exterior doors, and any other openings to the outside. If you are told there is danger of explosion, close window shades, blinds, or curtains.
- ✓ Have employees familiar with your building's mechanical systems turn off all fans and heating and air conditioning systems. Some systems automatically provide for exchange of inside air with outside air – these systems in particular need to be turned off, sealed, or disabled.
- ✓ Gather essential disaster supplies, such as nonperishable food, bottled water, battery-powered radios, first aid supplies, flashlights, batteries, duct tape, plastic sheeting, and plastic garbage bags.
- ✓ Select interior room(s) above the ground floor, with the fewest windows or vents. The room(s) should have adequate space for everyone to be able to sit in. Avoid overcrowding by selecting several rooms if necessary. Large storage closets, utility rooms, pantries, copy and conference rooms without exterior windows will work well. Avoid selecting a room with mechanical equipment like ventilation blowers or pipes, because this equipment may not be able to be sealed from the outdoors.
- ✓ It is ideal to have a hard-wired telephone in the room(s) you select. Call emergency contacts and have the phone available if you need to report a life-threatening condition. Cellular telephone equipment may be overwhelmed or damaged during an emergency.
- ✓ Use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door(s) and any vents into the room.

- ✓ Bring everyone into the room(s). Shut and lock the door(s).
- ✓ Write down the names of everyone in the room, and call your business' designated emergency contact to report who is in the room with you, and their affiliation with your business (employee, visitor, customer).
- ✓ Keep listening to the radio or television until you are told all is safe or you are told to evacuate. Local officials may call for evacuation in specific areas at greatest risk in your community.

IN A VEHICLE:

If you are driving a vehicle and hear advice to shelter-in-place on the radio, take these steps:

- ✓ If you are very close to home, your office, or a public building, go there immediately and go inside. Follow the shelter-in-place recommendations for the place you pick described above.
- ✓ If you are unable to get to a home or building quickly and safely, pull over to the side of the road. Stop your vehicle in the safest place possible. If it is sunny outside, it is preferable to stop under a bridge or in a shady spot, to avoid being overheated.
- ✓ Turn off the engine. Close windows and vents.
- ✓ If possible, seal the heating/air conditioning vents with duct tape.
- ✓ Listen to the radio regularly for updated advice and instructions.
- ✓ Stay where you are until you are told it is safe to get back on the road. Be aware that some roads may be closed or traffic detoured. Follow the directions of law enforcement officials.

Local officials on the scene are the best source of information for your particular situation. Following their instructions during and after emergencies regarding sheltering, food, water, and clean up methods is your safest choice.

Remember that instructions to shelter-in-place are usually provided for a duration of *a few hours, not days or weeks.* There is little danger that the room in which you are taking shelter will run out of oxygen – suffocation is not likely.

4.0 EMERGENCY EQUIPMENT & PPE

The EC monitors and stores all emergency equipment and PPE supplies stocked. Any deficiencies in supply or operation are corrected as soon as possible.

WGSL emergency equipment (and locations [see Figures 2a-2e]) consists of:

- Eye wash station (maintenance shop)
- Shovels
- Spill kit - contains absorbent (kitty litter), containment booms, sorbent pads (maintenance shop & mobile tank trucks)
- First aid kits (site vehicles & buildings)
- Fire extinguishers (all buildings, site vehicles & landfill equipment)

WGSL PPE includes:

- Hard hats
- High visibility safety vests dust masks
- Ear plugs
- Steel toe work boots
- Safety glasses (as needed)
- Gloves

5.0 ADMINISTRATIVE PROCEDURES

The WMH Environmental Protection Manager will work with the EC to ensure that corrective measures (if necessary) are implemented, follow-up reports / inspections are completed, and that the appropriate agencies and parties are notified.

5.1 EMERGENCY REPORTING

Emergency reporting will be in compliance with federal, state, local and WM requirements. WGSL reporting includes:

- Reporting of significant events/emergency incidents to the EC (or manager in charge), WMH Market Area Management, and to the WM Safety & Environmental Protection representatives.
- Reporting of significant events/emergency incidents to the proper agencies (if necessary) as soon as possible.

If it is determined that the WGSL has had a release, fire, or explosion involving hazardous materials that could threaten human health, or the environment outside the facility, the following actions should be taken:

- The EC shall immediately notify the appropriate local authorities and help these local officials decide whether local areas should be evacuated.
- The Environmental Protection Manager will immediately notify the DOH HEER Office. This report shall include: name and telephone number of reporter; name and address of facility; time and type of incident; name and quantity of material(s) involved to the extent known; the extent of injuries, if any; and the possible hazards to human health, or the environment, outside the facility.

5.2 TRAINING

In accordance with federal, state, local and WM requirements, WGSL personnel are trained annually on the *Emergency Action Plan* and what their roles/responsibilities are in the event of an emergency. The WGSL emergency training requirements include:

- ✓ As required, testing of the plan by key staff.
- ✓ Semi-annual drills with all employees (documentation form attached).
- ✓ Location of all emergency shut down and main electrical power switches.
- ✓ Fire hazards of the materials and hazards to which employees are exposed.
- ✓ Location and operation of fire extinguishers.
- ✓ Proper and safe handling of gasoline and other petroleum products including cleanup of minor spills.

- ✓ Location of the WGSL *Emergency Action Plan.*
- ✓ Location of evacuation routes and re-assembly/evacuation points for the site.

All trainings and drills are documented and placed in the WGSL Operating Record/Files.

5.3 PLAN UPDATE AND DISTRIBUTION

- The *Emergency Action Plan* is a living document and will be reviewed at least annually for accuracy and relevance and updated as warranted by changes in site conditions or procedures. Updates to this plan will be submitted to appropriate agencies in a timely manner. -

The *Emergency Action Plan* is part of the WGSL Site Operations Manual, of which there are four controlled copies - Two (2) copies remain on-site at the WGSL, one (1) copy will be submitted to the DOH, and one (1) copy will be submitted to the City & County of Honolulu. Copies of the Plan will also be distributed to the following personnel/locations:

- WGSL District Manager
- WGSL Operations Specialist (Reception desk)
- WMH Environmental Protection Manager
- A copy will be placed in the lounge

APPENDIX A

FIRE PREVENTION PLAN

APPENDIX A - FIRE PREVENTION PLAN

This Fire Prevention Plan for the Waimanalo Gulch Sanitary Landfill (WGSL) designates:

- ✓ Housekeeping procedures that help to prevent fires
- ✓ Potential fire hazards
- ✓ Proper handling and storage procedures for combustible materials
- ✓ Potential ignition sources and their control procedures
- ✓ Type of fire protection equipment available to control fire hazards

The names and job titles of personnel responsible for maintenance of equipment and systems installed to prevent or control ignition of fires and control of accumulation of flammable or combustible waste materials are:

- ✓ WGSL District Manager
- ✓ WGSL Emergency Coordinator
- ✓ WGSL Mechanic
- ✓ WMH Director of Operations
- ✓ WMH Environmental Protection Manager

HOUSEKEEPING PROCEDURES FOR FIRE PREVENTION:

- Avoid the accumulation of combustible materials.
- Keep flammable and combustible materials away from ignition sources.
- Keep all stairways, fire fighting equipment locations, and exit paths clear.
- Report spill/leaks promptly to management to assure corrective action is taken.
- Remove all waste at the end of each shift and placing it in the appropriate waste receptacles.
- Store all oily rags in an approved receptacle.
- Store flammables in an approved flammable cabinet a minimum of 25 feet from sources of ignition;
- Store work clothes in metal lockers;
- Use correct cleaning agents and avoiding the use of flammable/combustible materials for cleaning.
- Contain and clean up fuel spills immediately. Soil contaminated with spilled fuel will be excavated and, if authorized, disposed of at the working face.

POTENTIAL FIRE HAZARDS, POTENTIAL IGNITION SOURCES, PROPER HANDLING/STORAGE PROCEDURES, AND FIRE PROTECTION EQUIPMENT

Tables 1 and 2 list the potential fire hazards, potential ignition sources, proper handling/storage procedures, and fire protection equipment that can control these hazards.

TABLE A-1

SITE LOCATIONS WITH POTENTIAL FIRE HAZARDS AND POTENTIAL IGNITION SOURCES

LOCATION	*POTENTIAL FIRE HAZARDS*	*POTENTIAL IGNITION SOURCES*
Administrative Offices	Combustible materials (e.g. paper, cardboard, etc.) Electrical cords/outlets/wiring Flammable/combustible liquids (e.g. aerosol cans, solvents, etc.)	Open flames (e.g. smoking materials, etc.) Hot surfaces (e.g. appliances, electrical wiring, etc.) Open flames (e.g. smoking materials, etc.)
Maintenance Shop	Flammable/combustible liquids (e.g. diesel, solvents, product oils, etc.) Combustible materials (e.g. paper, cardboard, etc.) Electrical cords/outlets/wiring Flammable/oxidizing gases (e.g. acetylene, oxygen, etc.) Open flames (e.g. welding, cutting, etc.) Contaminated materials (e.g. oily rags, etc.)	Open flames (e.g. welding, smoking materials, etc.) Sparks from friction (e.g. grinding) Hot surfaces (e.g. power tools, electrical wiring, etc.) Static electricity Internal combustion engines (e.g. vehicles, forklifts, etc.) Open flames (e.g. welding, smoking materials, etc.)
Storage Containers	Flammable/combustible liquids (e.g. paints, solvents, etc.) Combustible materials (e.g. paper, cardboard, etc.) Electrical cords/outlets/wiring Flammable/oxidizing gases (e.g. acetylene, oxygen, etc.) Open flames (e.g. welding, cutting, etc.) Contaminated materials (e.g. oily rags, etc.)	Open flames (e.g. welding, smoking materials, etc.) Sparks from friction (e.g. grinding) Hot surfaces (e.g. power tools, electrical wiring, etc.) Static electricity Internal combustion engines (e.g. vehicles, forklifts, etc.) Open flames (e.g. welding, smoking materials, etc.)

TABLE A-2

CONTROL PROCEDURES AND FIRE PROTECTION EQUIPMENT FOR POTENTIAL FIRE HAZARDS AND POTENTIAL IGNITION SOURCES

POTENTIAL FIRE HAZARDS/ IGNITION SOURCES	***CONTROL PROCEDURE/FIRE PROTECTION EQUIPMENT***
Combustible materials	Avoid accumulation of combustible materials (e.g. empty boxes, cartons, loose paper, etc.) Keep combustible materials away from ignition sources including establishment/enforcement of no smoking/no open flame areas Keep all stairways, firefighting equipment locations and exit paths clear Remove all waste (e.g. dust, lint, loose paper, etc.) at the end of each shift in each work area (including floors, ceilings, walls, ledges, beams, and equipment) and place in appropriate waste receptacle Store work clothes in metal lockers Maintain fire extinguishing equipment capable of handling Class A fires within 75 feet of combustible materials Perform annual maintenance and monthly inspections on fire extinguishing equipment Train personnel in use of fire extinguishing equipment
Electrical cords/outlets/wiring	Inspect power cords for damaged insulation and damaged plugs Discontinue use of a power cord that gets warm Maintain electrical motors in good operating condition Do not overload motors, cords or other electrical equipment Maintain fire-extinguishing equipment capable of handling Class C fires near electrical equipment Perform annual maintenance and monthly inspections on fire extinguishing equipment Train personnel in use of fire extinguishing equipment

Flammable/combustible liquids	Keep materials in covered containers when not in use Do not transport materials in open containers Store flammable liquids in containers with appropriate warning labels Do not store near sources of heat/ignition Inert and verify inert atmosphere of containers, piping, tanks that have contained flammable/combustible liquids prior to exposure to heat/flame Maintain fire-extinguishing equipment capable of handling Class B fires within 50 feet of flammable/combustible liquids Perform annual maintenance and monthly inspections on fire extinguishing equipment Train personnel in use of fire extinguishing equipment
Welding/cutting operations	Establish approved areas for cutting and welding Establish approved procedures for a hot work program to restrict cutting/welding in all other areas along with a designated individual for approving such cutting/welding Utilize only approved equipment for cutting/welding Train all personnel that perform cutting/welding Verify training of contractors who perform cutting/welding Provide contractor orientation of potential fire hazards on-site Do not perform cutting/welding within 35 feet of combustible materials Implement hot work permit program Maintain fire extinguishing equipment capable of handling Class A, B, and C fires near the welding operation Perform annual maintenance and monthly inspections on fire extinguishing equipment Train personnel in use of fire extinguishing equipment
Flammable/oxidizing gas cylinders	Do not store cylinders near sources of heat/flame Cylinders stored inside buildings will be in a well-protected, well-ventilated, dry location at least 20 feet from highly combustible materials Cylinders storage will be located where passing/falling objects will not damage cylinders Do not sore cylinders where they could be subject to tampering by unauthorized personnel Do not store cylinders near elevators, stairs or passageways Do not store cylinders in unventilated enclosures Do not store oxygen cylinders near highly combustible materials such as oil/grease Maintain fire extinguishing equipment capable of handling Class A, B, and C fires within 75 feet of welding areas

Open flames	Keep sources of ignition including open flames away from combustible materials Establish and enforce no smoking/no open flame areas Establish and enforce a hot work program Maintain fire extinguishing equipment capable of handling Class A, B, C fire near areas with open flames
Contaminated materials	Keep sources of ignition away from contaminated materials Store contaminated materials in appropriate waste receptacle (e.g. oil rag container) Maintain fire extinguishing equipment capable of handling Class A, B, and C fires where contaminated materials are stored
Hot surfaces	Keep sources of ignition including hot surfaces away from combustible materials Maintain fire extinguishing equipment capable of handling Class A, B, and C fires near areas with hot surfaces
Sparks from friction	Keep sources of ignition including sparks from friction away from combustible materials Maintain fire extinguishing equipment capable of handling Class A, B, and C fires near areas where sparks from friction may occur
Static electricity	Utilize proper grounding/bonding procedures when moving volatile liquids Verify continuity of grounds on a regular basis Maintain fire extinguishing equipment capable of handling Class A, B, and C fires within 50 feet of flammable/combustible liquid storage
Internal combustion engines	Maintain internal combustion engines in good repair Clean up spills/leaks from internal combustion engines promptly and store contaminated material safely Report spills/leaks from internal combustion engines promptly to supervision to assure corrective action is taken Maintain fire extinguishing equipment capable of handling Class A, B, and C fires on all vehicles

FIRE PROTECTION EQUIPMENT

The WGSL is equipped with fire extinguishers that are fully charged and ready for use at all times. Each extinguisher is inspected on an annual basis and recharged as necessary. A qualified service company performs the annual inspections, and all extinguishers display a current inspection tag. Inspection and recharging will be performed following each use. The main office, scale house, all landfill equipment, and landfill vehicles are equipped with fire extinguishers.

The fire prevention plan and fire control procedures for the WGSL will be revisited following the occurrence of a significant fire to determine if modifications are warranted.

FIRE EXTINGUISHER USE

All WGSL equipment operators are trained annually on the proper usage of fire extinguishers. Documentation of training sessions are kept on-site as part of the WGSL Operating Record/Files.

All landfill equipment has a charged ABC fire extinguisher with at least a 20-pound rating. This type of extinguisher is good for:

- A – Ordinary combustibles (paper, leaves, general trash, etc.)
- B – Flammable liquids (diesel fuel, hydraulic oil, motor oil, etc.)
- C – Electrical equipment (electrical wiring system on the equipment)

Use the **P.A.S.S.** method for extinguishing a small fire:

P ull the pin.
A im at the base of the flame.
S queeze the handle.
S weeping motion from side-to-side.

If the fire has grown beyond a small fire, clear the area and allow the fire department to extinguish the fire.

APPENDIX B

POST EARTHQUAKE FORMS

&

POST HURRICANE / SEVERE STORM FORMS

WAIMANALO GULCH SANITARY LANDFILL
92-460 Farrington Highway
Kapolei, HI 96707

EARTHQUAKE DAMAGE REPORT FORM

Date / Time of Seismic Event: _____
Date / Time of Inspection: _____

Note: Fill out one form for each damage observation.

1. What is damaged?_____
2. Location of damage:_____
3. Description of Damage:_____

Log of Corrective Actions Implemented:_____

_____

_____

_____

_____

_____

_____

_____

Date damage was repaired: _____

Damage repaired by: _____

WAIMANALO GULCH SANITARY LANDFILL
POST EARTHQUAKE INSPECTION SHEET

Date of Earthquake: _____
Date of Inspection: _____

Distance from Epicenter: _____
Epicenter Location: _____
.
Time of Earthquake: _____
Time of Inspection: _____

Person(s) Conducting Inspection: _____
_____

	Damage Evident	
	Yes	**No**
Drainage Structures		
• west side rip-rap	_____	_____
• head of drainage channel	_____	_____
• interceptor drains	_____	_____
• down drains	_____	_____
• sedimentation basin	_____	_____
• inlet/outlet structures (risers)	_____	_____
Fueling / Maintenance Area		
• 600-gallon (diesel) mobile lube truck	_____	_____
• 5000-gallon (diesel) truck (stationary)	_____	_____
• maintenance buildings/containers	_____	_____
• 360-gallon waste oil AST (Above Ground Storage Tank)	_____	_____
• 360-gallon new/lube oil AST	_____	_____
• 360-gallon hydraulic oil AST	_____	_____
• miscellaneous 55-gallon drums	_____	_____

Any leaks/spills?_____

Side Slopes	_____	_____
Landfill Cover	_____	_____
Access Roads	_____	_____
Landfill Heavy Equipment	_____	_____
Fencing	_____	_____

	Damage Evident	
	Yes	No
Tire Container Storage Area		
• frac tank(s)	_____	_____
Facility Buildings		
• admin office	_____	_____
• scale house	_____	_____
• telephones	_____	_____
• lounge/ breaker trailer	_____	_____
• computers	_____	_____
• scales	_____	_____
• parking lot	_____	_____
Water Supply		
• main water meter	_____	_____
• mainline	_____	_____
• water truck	_____	_____
• backflow preventer	_____	_____
Sewer Line(s)	_____	_____
Power Line(s)	_____	_____
Leachate Collection Systems		
• E1 riser		
o frac tank	_____	_____
o sump/riser	_____	_____
o transducer system/panel	_____	_____
o pipes/hoses	_____	_____
o pumps	_____	_____
o power	_____	_____
o berms	_____	_____

- Ash riser
  - o frac tank _____ _____
  - o sump/riser _____ _____
  - o transducer system/panel _____ _____
  - o pipes/hoses _____ _____
  - o pumps _____ _____
  - o power _____ _____
  - o berms _____ _____

- 4B riser
  - o frac tank _____ _____
  - o sump/riser _____ _____
  - o transducer system/panel _____ _____
  - o pipes/hoses _____ _____
  - o pumps _____ _____
  - o power _____ _____
  - o berms _____ _____

Any leaks/spills?_____
Any vapors evident?_____

	Damage Evident	
	Yes	No

Flare Station /System

- concrete pad/skid _____ _____
- condensate injection system _____ _____
- condensate poly tank(s) _____ _____
- gas header pipe _____ _____
- gas wells _____ _____
- power supply _____ _____
- system panel _____ _____
- flare stack _____ _____

Any leaks/spills?_____

Any evidence of physical change around the gas wells such as:

- differential settlement? _____
- compromised seal integrity?_____

Temporary Perimeter Gas Probes (14) _____ _____

Groundwater Wells (6)

- concrete pads _____ _____
- housing _____ _____
- casing _____ _____
- guard posts/fencing _____ _____

Any evidence of damage to wells such as:

- ponded water?_____
- settlement around the wells? _____

Was there any damage to landfill structures, cover or systems caused by the above seismic event?

YES _____ NO _____

If yes, complete an Earthquake Damage Report Form.

WAIMANALO GULCH SANITARY LANDFILL
92-460 Farrington Highway
Kapolei, HI 96707

POST HURRICANE / SEVERE STORM DAMAGE REPORT FORM

Type of Storm (Depression, Tropical Storm, Hurricane): _____
Date / Time / Duration: _____
Date / Time of Inspection: _____

Note: Fill out one form for each damage observation.

1. What is damaged?_____

2. Location of damage:_____

3. Description of Damage:_____

Log of Corrective Actions Implemented:_____

_____

_____

_____

_____

_____

_____

_____

Date damage was repaired: _____

Damage repaired by: _____

WAIMANALO GULCH SANITARY LANDFILL
POST HURRICANE / SEVERE STORM INSPECTION SHEET

Type of Storm (Depression, Tropical Storm, Hurricane): _____
Date of Storm: _____
Date of Inspection: _____

Category of Hurricane (if applicable): _____
Recorded Wind Speed(s): _____
.
Time of Hurricane: _____
Time of Inspection: _____

Person(s) Conducting Inspection: _____
_____

	Damage Evident	
	Yes	**No**
Drainage Structures		
• west side drainage rip-rap	_____	_____
• head of drainage channel	_____	_____
• interceptor drains	_____	_____
• down drains	_____	_____
• sedimentation basin	_____	_____
• inlet/outlet structures (risers)	_____	_____
Fueling / Maintenance Area		
• 600-gallon (diesel) mobile lube truck	_____	_____
• 5000-gallon (diesel) truck (stationary)	_____	_____
• maintenance buildings/containers	_____	_____
• 360-gallon waste oil AST (Above Ground Storage Tank)	_____	_____
• 360-gallon new/lube oil AST	_____	_____
• 360-gallon hydraulic oil AST	_____	_____
• miscellaneous 55-gallon drums	_____	_____

Any leaks/spills?_____

Side Slopes	_____	_____
Landfill Cover	_____	_____
Access Roads	_____	_____
Landfill Heavy Equipment	_____	_____
Fencing	_____	_____

	Damage Evident	
	Yes	No
Tire Container Storage Area		
• frac tank(s)	_____	_____
Facility Buildings		
• admin office	_____	_____
• scale house	_____	_____
• telephones	_____	_____
• lounge/ breaker trailer	_____	_____
• computers	_____	_____
• scales	_____	_____
• parking lot	_____	_____
Water Supply		
• main water meter	_____	_____
• mainline	_____	_____
• water truck	_____	_____
• backflow preventer	_____	_____
Sewer Line(s)	_____	_____
Power Line(s)	_____	_____
Leachate Collection Systems		
• E1 riser		
o frac tank	_____	_____
o sump/riser	_____	_____
o transducer system/panel	_____	_____
o pipes/hoses	_____	_____
o pumps	_____	_____
o power	_____	_____
o berms	_____	_____

- Ash riser
  - o frac tank _____ _____
  - o sump/riser _____ _____
  - o transducer system/panel _____ _____
  - o pipes/hoses _____ _____
  - o pumps _____ _____
  - o power _____ _____
  - o berms _____ _____

- 4B riser
  - o frac tank _____ _____
  - o sump/riser _____ _____
  - o transducer system/panel _____ _____
  - o pipes/hoses _____ _____
  - o pumps _____ _____
  - o power _____ _____
  - o berms _____ _____

Any leaks/spills?_____
Any vapors evident?_____

	Damage Evident	
	Yes	No
Flare Station /System		
• concrete pad/skid	_____	_____
• condensate injection system	_____	_____
• condensate poly tank(s)	_____	_____
• gas header pipe	_____	_____
• gas wells	_____	_____
• power supply	_____	_____
• system panel	_____	_____
• flare stack	_____	_____

Any leaks/spills?_____

Any evidence of physical change around the gas wells such as:

- differential settlement? _____
- compromised seal integrity?_____

Temporary Perimeter Gas Probes (14) _____ _____

Groundwater Wells (6)

- concrete pads _____ _____
- housing _____ _____
- casing _____ _____
- guard posts/fencing _____ _____

Any evidence of damage to wells such as:

- ponded water?_____
- settlement around the wells? _____

Was there any damage to landfill structures, cover or systems caused by the above seismic event?

YES _____ NO _____

If yes, complete a Hurricane / Severe Storm Damage Report Form.

TRAINING

Training will be per the “Training” subsection of the Emergency Action Plan and Fire Prevention Plan.

This Program is hereby approved:

SIGNATURE	DATE

DOCUMENTATION OF SEMI-ANNUAL DRILL

Date Performed_____

Facility Name_____

Certified By _____ Title _____

Comments_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ACKNOWLEDGEMENT FORM

I, (print name) _____ have received training on the Waimanalo Gulch Sanitary Landfill Emergency Action Plan Program. I had the opportunity to have questions answered pertaining to the training material and instructions that were presented to me by the Company. I understand the training I have received and agree to abide by the standards presented.

_____
(Employee) Print Name

_____
(Employee) Signature

_____
(Instructor) Print Name

_____
(Instructor) Signature

_____
Date